

Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of the claims in this application:

1 (Currently amended). A composition for removal of etch residues from integrated circuits using copper materials, which comprises a choline compound, water and an organic solvent, wherein the composition does not contain a sugar or a sugar alcohol.

2 (Currently amended). The composition of claim 1 in which the composition comprises from about 10 percent by weight to about 50 percent by weight of the choline compound.

3 (Previously presented). The composition of claim 2 in which the composition comprises from about 10 percent by weight to about 80 percent by weight of water.

4 (Currently amended). The composition of claim 3 in which the composition comprises from about 20 percent by weight to about 80 percent by weight of the organic solvent.

5 (Original). The composition of claim 1 in which the choline compound comprises choline hydroxide, choline bicarbonate or choline chloride.

6 (Original). The composition of claim 5 in which the choline compound is choline hydroxide.

7 (Original). The composition of claim 5 in which the organic solvent comprises propylene glycol, dimethyl sulfoxide, monoethanolamine, or diglycolamine.

8 (Original). The composition of claim 1 in which the composition additionally comprises hydroxylamine.

9 (Original). The composition of claim 1 in which the composition additionally comprises a corrosion inhibitor.

10-31 (Cancelled).

~~10~~ 32 (Currently amended). A composition for the removal of etch residues from integrated circuits using copper materials, in which the composition comprises from greater than 20% to about 50% by weight choline, water, and an organic solvent.

11 33 (Currently amended). The composition of claim 10 32 in which the composition comprises from about 10 percent by weight to about 80 percent by weight of water.

12 34 (Currently amended). The composition of claim 11 33 in which the composition comprises from about 20 percent by weight to about 80 percent by weight of the organic solvent.

13 35 (Currently amended). The composition of claim 10 32 in which the choline compound comprises choline hydroxide, choline bicarbonate or choline chloride.

14 36 (Currently amended). The composition of claim 13 32 in which the choline compound comprises choline hydroxide.

15 37 (Currently amended). The composition of claim 13 35 in which the organic solvent comprises propylene glycol, dimethyl sulfoxide, monoethanolamine, or diglycolamine.

16 38 (Currently amended). The composition of claim 10 32 in which the composition additionally comprises hydroxylamine or hydroxylamine salt.

17 39 (Currently amended). The composition of claim 10 32 in which the composition additionally comprises a corrosion inhibitor.

18 40 (Currently amended). A composition for the removal of etch residues from integrated circuits using copper materials, in which the composition comprises from about 10% by weight choline to about 50% by weight choline; water; and a glycol selected from the group consisting of ethylene glycol, ethylene glycol alkyl ether, diethylene glycol alkyl ether, triethylene glycol alkyl ether, propylene glycol, and propylene glycol alkyl ether; wherein the composition does not contain a sugar or a sugar alcohol.

19 41 (Currently amended). The composition of claim 18 40 where the choline comprises choline hydroxide and the glycol comprises propylene glycol.

20 42 (Currently amended). The composition of claim 19 41 in which the composition comprises about 22.5% by weight choline hydroxide, about 50% by propylene glycol, and about 27.5% by weight water.

21 43 (Currently amended). The composition of claim 12 34 in which the composition additionally comprises from about 2 to about 12% by weight of hydroxylamine or hydroxylamine salt.

22 44 (Currently amended). The composition of claim ~~21~~ 43 in which the composition additionally comprises from about 0.5 to about 5% by weight of a corrosion inhibitor.

23 45 (Currently amended). The composition of claim 4 in which the choline is choline hydroxide and the organic solvent is propylene glycol.

46 (New). A sugar and sugar alcohol free composition for removal of etch residues from integrated circuits using copper materials, which comprises
a choline compound;
water; and

an organic solvent selected from the group consisting of dimethyl sulfoxide, dimethyl acetamide, ethylene glycol, ethylene glycol alkyl ether, diethylene glycol alkyl ether, triethylene glycol alkyl ether, propylene glycol, propylene glycol alkyl ether, and N-methyl pyrrolidone.

47 (New). The composition of claim 46 in which the composition comprises from about 10 percent by weight to about 50 percent by weight of the choline compound; from about 10 percent by weight to about 80 percent by weight of water; and from about 20 percent by weight to about 80 percent by weight of the organic solvent.

48 (New). The composition of claim 46 in which the composition additionally comprises hydroxylamine.

49 (New). The composition of claim 46 in which the composition additionally comprises from about 4% by weight to about 5% by weight of a corrosion inhibitor.